

1. Record Nr.	UNINA9910557612603321
Autore	Del Nevo Alessandro
Titolo	Thermal-Hydraulics in Nuclear Fusion Technology: R&D and Applications
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 electronic resource (422 p.)
Soggetti	Computing & information technology Operating systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>In nuclear fusion technology, thermal-hydraulics is a key discipline employed in the design phase of the systems and components to demonstrate performance, and to ensure the reliability and their efficient and economical operation. ITER is in charge of investigating the transients of the engineering systems; this included safety analysis. The thermal-hydraulics is required for the design and analysis of the cooling and ancillary systems such as the blanket, the divertor, the cryogenic, and the balance of plant systems, as well as the tritium carrier, extraction and recovery systems. This Special Issue collects and documents the recent scientific advancements which include, but are not limited to: thermal-hydraulic analyses of systems and components, including magneto-hydrodynamics; safety investigations of systems and components; numerical models and code development and application; codes coupling methodology; code assessment and validation, including benchmarks; experimental infrastructures design and operation; experimental campaigns and investigations; scaling issue in experiments.</p>